

## Message

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**From:** Gibbons, Catherine [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=2AC775A35A0945718EDC7E02F50E6C12-GIBBONS, CATHERINE]  
**Sent:** 9/21/2016 11:51:42 PM  
**To:** Newhouse, Kathleen [Newhouse.Kathleen@epa.gov]  
**CC:** Subramaniam, Ravi [Subramaniam.Ravi@epa.gov]  
**Subject:** RE: ERC Review: Benzo[a]pyrene  
**Attachments:** BaP-Supplemental Info-revised post SAB review 8-19-2016-cleancopy\_cfg 9-21-16.docx

OK, I figured out a few things, promised I'd do this faster!!

# Ex. 5 Deliberative Process (DP)

Carcinogenesis. 1995 Jun;16(6):1373-6.

## **Anti-benzo[a]pyrene diolepoxide--DNA adduct levels in peripheral mononuclear cells from coke oven workers and the enhancing effect of smoking.**

Rojas M<sup>1</sup>, Alexandrov K, Auburtin G, Wastiaux-Denamur A, Mayer L, Mahieu B, Sebastien P, Bartsch H.

### Author information

#### Abstract

The level of (+/-)-r-7,t-8-dihydroxy-t-9,10-oxy-7,8,9,10-tetrahydrobenzo[a]pyrene (anti-BPDE) bound to DNA of lymphocytes plus monocytes in 39 coke oven workers exposed to polycyclic aromatic hydrocarbons (PAH) and 39 non-exposed persons (controls) were investigated, each of the groups consisting of smokers and non-smokers. The adduct level was measured by an improved HPLC/fluorescence method (Rojas, M., Alexandrov, K., van Schooten, F. J., Hillebrand, M., Kriek, E. and Bartsch, H., *Carcinogenesis*, 15, 557-560, 1994) through the release of the corresponding benzo[a]pyrene (B[a]P) tetrols. The anti-BPDE-DNA adduct was detected in 51% of coke oven workers exposed to PAH and in 18% of the non-exposed (control) subjects. The mean level of anti-BPDE-DNA adducts/10(8) nucleotides in coke oven workers (15.7 +/- 37.8) was approximately 8 times higher than in non-exposed subjects (2.0 +/- 8.7). The interindividual variation of adduct levels was approximately 100-fold in coke oven workers and approximately 50-fold in

controls respectively. Smokers in the exposed group had 3.5 times more DNA adducts than non-smokers. With the exception of one non-smoker with very high adduct levels (52.8 adducts/10(8)), the control subjects showed the presence of barely detectable adducts in only 16% of the samples examined. The increased in vivo formation in some smokers and high variability of anti-BPDE-DNA adducts in coke oven workers suggests variations in genetically controlled activation/inactivation reactions of PAH metabolism.

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**From:** Newhouse, Kathleen  
**Sent:** Wednesday, September 21, 2016 4:40 PM  
**To:** Gibbons, Catherine <Gibbons.Catherine@epa.gov>  
**Cc:** Subramaniam, Ravi <Subramaniam.Ravi@epa.gov>  
**Subject:** RE: ERC Review: Benzo[a]pyrene

I think that sounds fine.

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**From:** Gibbons, Catherine  
**Sent:** Wednesday, September 21, 2016 1:38 PM  
**To:** Newhouse, Kathleen <Newhouse.Kathleen@epa.gov>  
**Cc:** Subramaniam, Ravi <Subramaniam.Ravi@epa.gov>  
**Subject:** RE: ERC Review: Benzo[a]pyrene

So, it would be OK to add a couple more studies? Should I do this in my own doc and send to you? (Plus revised response?)

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**From:** Newhouse, Kathleen  
**Sent:** Wednesday, September 21, 2016 4:31 PM  
**To:** Gibbons, Catherine <Gibbons.Catherine@epa.gov>  
**Cc:** Subramaniam, Ravi <Subramaniam.Ravi@epa.gov>  
**Subject:** RE: ERC Review: Benzo[a]pyrene

OK. Do what you need/want to do, and let me know how you would like to revise the response.  
Thanks!  
-K

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**From:** Gibbons, Catherine  
**Sent:** Wednesday, September 21, 2016 1:28 PM  
**To:** Newhouse, Kathleen <Newhouse.Kathleen@epa.gov>  
**Cc:** Subramaniam, Ravi <Subramaniam.Ravi@epa.gov>  
**Subject:** RE: ERC Review: Benzo[a]pyrene

OK, here's the 4 studies I added: Herbstman et al. 2012; Pavanello et al. 2004; Rojas et al. 2001; 1998.

## Ex. 5 Deliberative Process (DP)

Others I considered, with my notes:

## Ex. 5 Deliberative Process (DP)

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## Ex. 5 Deliberative Process (DP)

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**From:** Newhouse, Kathleen  
**Sent:** Wednesday, September 21, 2016 3:53 PM  
**To:** Gibbons, Catherine <[Gibbons.Catherine@epa.gov](mailto:Gibbons.Catherine@epa.gov)>  
**Cc:** Subramaniam, Ravi <[Subramaniam.Ravi@epa.gov](mailto:Subramaniam.Ravi@epa.gov)>  
**Subject:** FW: ERC Review: Benzo[a]pyrene

Hi Catherine, thanks for giving BaP some of your time ;)

Here is the comment from Norm that has to do with the response regarding the studies that were added to table D-33:

## Ex. 5 Deliberative Process (DP)

# Ex. 5 Deliberative Process (DP)

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**From:** Jones, Samantha

**Sent:** Thursday, September 15, 2016 12:27 PM

**To:** Newhouse, Kathleen <[Newhouse.Kathleen@epa.gov](mailto:Newhouse.Kathleen@epa.gov)>; Hogan, Karen <[Hogan.Karen@epa.gov](mailto:Hogan.Karen@epa.gov)>

**Cc:** Subramaniam, Ravi <[Subramaniam.Ravi@epa.gov](mailto:Subramaniam.Ravi@epa.gov)>

**Subject:** FW: ERC Review: Benzo[a]pyrene

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**From:** Birchfield, Norman

**Sent:** Thursday, September 15, 2016 2:54 PM

**To:** Jones, Samantha <[Jones.Samantha@epa.gov](mailto:Jones.Samantha@epa.gov)>; Makris, Susan <[Makris.Susan@epa.gov](mailto:Makris.Susan@epa.gov)>; Segal, Deborah <[Segal.Deborah@epa.gov](mailto:Segal.Deborah@epa.gov)>; White, Paul <[White.Paul@epa.gov](mailto:White.Paul@epa.gov)>

**Subject:** RE: ERC Review: Benzo[a]pyrene

Hi Samantha

Here are my comments embedded in the response to comments appendix attached. I have responded to the "issues for ERC review" where I had something constructive to add.

I would like to say that I think the BaP document overall is really well written and remarkably concise. The team should be congratulated on that as well as for their objective analysis of the database.

Thanks!

Norm

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